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ADA clinical recommendations on topical fluoride for caries prevention.

***Evidence-Based Dentistry* 2014, 15, 38-39.**

These updated guidelines replace the 2006 guidelines for Professionally Applied Topical Fluoride (PATF) use which were limited to F varnish and F gels for all individuals and for individuals aged 6 or older respectively, who were at higher risk of caries[1].

The report had 2 main aims; firstly, to provide an update on the efficacy of PATF use based on a thorough review of the clinical evidence and to determine the need for prophylaxis prior to application of topical fluorides. The systematic review concluded that topical fluorides do provide additional benefit but that prophylaxis prior to their use did not improve efficacy compared with no prophylaxis. Secondly, the panel sought to address additional questions related to prescription strength home-use topical fluorides for caries prevention. It is this introduction of "prescription level" concentrations of topical fluorides for home use from the age of 6 years where these US guidelines differ fairly substantially from international equivalents. However, the reporting of the guidelines are a little unclear; the overall guidance summary table appears to provide 2 alternatives for office use AND two alternatives for home use while report's abstract, through the extensive use of the word "OR", appears to advocate the use of ONLY ONE topical fluoride, with the decision on its form and location of use being made by the dentist, using their professional judgement and having considered their patient's needs and preferences.

The new guidelines reiterate that the recommended topical fluoride use is in addition to drinking fluoridated water and using Over the Counter (OTC) strength fluoridated toothpastes, recommended for use by all individuals, irrespective of caries risk. However, the decision to widen the use of a 0.09% F (900 ppmF) mouthrinse from its previous main area of use, ie. Weekly supervised mouthrinsing in schools, is a major change. This product is recommended for "at least weekly use" in the home arena in individuals older than 6 years, with a 0.5% (5000ppmF) fluoride gel or paste as an alternative measure, also for home use in the same age groups. The evidence the panel considered was sufficient to allow the designation of "in favor" for mouthrinse use in 6-18y olds, while for home-based mouthrinse use in older individuals, home based use of F gel/pastes, and professionally applied F varnishes and APF gels the strength of the recommendation was only at the level of "expert opinion for" its use. The limitations to the existing literature on topical fluorides for caries prevention were clearly highlighted by the panel who concluded that further clinical research was necessary, using standardised methods and reporting.

Considering the impact of these guidelines on the various stakeholders, the need to monitor systemic fluoride exposure in vulnerable groups; eg. 6-9y olds, will be enhanced as inadvertent ingestion of fluoride may increase through exposure to additional sources at home. It is clear that there is not yet universal compliance with responsible supervision and use of toothpastes in younger children and the ADA have also recently reinforced their advice in this area[2].

For the practitioner

It is important for prescribing dentists to carefully assess which families would benefit from home based higher F concentration topical fluoride use and which might be best managed in traditional practice-based PATF programmes.

Ensuring parental/carer responsibility in strictly following manufacturers' instructions for use when supervising the dispensing and use of F containing products in recipient children is an important professional challenge.

References:

[1] ADA Council on Scientific Affairs. Professionally applied topical fluoride. Evidence-based clinical recommendations. Journal of the American Dental Association 2006;137(8):1151-9.

[2] ADA Council on Scientific Affairs. Fluoride toothpaste use for young children. Journal of the American Dental Association 2014;145(2):190-191